

Comparisons of Job Characteristics

Focus Occupation: **Industrial Machinery Mechanics (49-9041)**

Associated Occupation: **Millwrights (49-9044)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Industrial Machinery Mechanics (49-9041)

Associated Occupation: Millwrights (49-9044)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mechanical	6.8	22.9	20.1	<	Expanded education and/or training may be required
Mathematics	9.2	15.8	11.7	<<	Extensive education and/or training may be required
Building and Construction	4.0	11.7	9.7	<	Expanded education and/or training may be required
Design	5.2	11.0	11.5	0	Current knowledge level may be sufficient
Physics	4.3	9.7	7.4	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 67

Focus Occupation: Industrial Machinery Mechanics (49-9041)

Associated Occupation: Millwrights (49-9044)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Installation	1.7	13.7	6.4	<<	Extensive development of skills in this area may be required
Equipment Maintenance	3.5	11.9	14.6	>	Skill level is likely sufficient
Operation Monitoring	6.6	11.6	14.2	>	Skill level is likely sufficient
Repairing	3.4	11.1	15.6	>>	Skill level is likely more than sufficient
Troubleshooting	4.5	11.1	13.6	>	Skill level is likely sufficient
Operation and Control	5.4	10.0	11.6	>	Skill level is likely sufficient
Quality Control Analysis	5.9	9.8	12.3	>	Skill level is likely sufficient
Equipment Selection	3.3	7.6	9.8	>	Skill level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 86			
Focus Occupation: Industrial Machinery Mechanics (49-9041) Associated Occupation: Millwrights (49-9044)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Control Precision	6.6	12.5	12.9	0	Current ability level may be sufficient
Multilimb Coordination	6.0	12.2	11.5	0	Current ability level may be sufficient
Finger Dexterity	7.6	12.0	11.9	0	Current ability level may be sufficient
Visualization	7.5	12.0	10.7	<	Some improvement in abilities may be required
Manual Dexterity	6.5	11.9	12.6	0	Current ability level may be sufficient
Extent Flexibility	4.8	11.4	10.3	<	Some improvement in abilities may be required
Trunk Strength	5.7	11.2	10.0	<	Some improvement in abilities may be required
Static Strength	5.0	11.1	10.1	0	Current ability level may be sufficient
Response Orientation	4.0	9.4	8.3	<	Some improvement in abilities may be required
Gross Body Equilibrium	3.2	8.8	7.3	<	Some improvement in abilities may be required
Speed of Limb Movement	3.2	8.3	7.7	0	Current ability level may be sufficient
Dynamic Strength	3.5	8.1	6.2	<	Some improvement in abilities may be required
Glare Sensitivity	2.6	6.6	6.2	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 97
Focus Occupation: Industrial Machinery Mechanics (49-9041) Associated Occupation: Millwrights (49-9044)		
Work Activities	Exclusivity of Activity	
Adhere to safety procedures	12	
Adjust or set mechanical controls or components	69	
Align or adjust clearances of mechanical components or parts	72	
Assemble and install pipe sections, fittings, or plumbing fixtures	71	
Assemble, dismantle, or reassemble equipment or machinery	70	
Conduct performance testing	66	
Conduct tests to locate mechanical system malfunction	71	
Cut, bend, or thread pipe for gas, air, hydraulic, or water lines	84	

Determine installation, service, or repair needed	58
Diagnose mechanical problems in machinery or equipment	65
Fabricate, assemble, or disassemble manufactured products by hand	11
Identify properties of metals for repair or fabrication activities	71
Install electrical conduit or tubing	81
Install electrical fixtures or components	71
Install electronic equipment, components, or systems	62
Install equipment or attachments on machinery or related structures	48
Install industrial machinery or related heavy equipment	89
Install or replace meters, regulators, or related measuring or control devices	66
Install/connect electrical equipment to power circuit	57
Lubricate machinery, equipment, or parts	59
Maintain or repair industrial or related equipment/machinery	39
Maintain or repair work tools or equipment	81
Maintain welding machines or equipment	70
Move or fit heavy objects	8
Operate hoist, winch, or hydraulic boom	34
Operate pneumatic test equipment	82
Perform detailed welding techniques	95
Perform hydraulic plumbing	92
Perform safety inspections in industrial, manufacturing or repair setting	32
Position, align, or level machines, equipment, or structures	74
Program computer numerical controlled machines	89
Read blueprints	10
Read schematics	34
Read specifications	23
Read technical drawings	7
Read work order, instructions, formulas, or processing charts	9
Repair or replace malfunctioning or worn mechanical components	62
Set up and operate variety of machine tools	62
Set up computer numerical control machines	69
Test electrical/electronic wiring, equipment, systems or fixtures	54
Test mechanical products or equipment	56
Understand service or repair manuals	40
Understand technical operating, service or repair manuals	6
Use acetylene welding/cutting torch	54
Use arc welding equipment	62
Use basic plumbing techniques	72
Use combination welding procedures	68
Use control or regulating devices to adjust or maintain industrial machinery	89
Use electrical or electronic test devices or equipment	40
Use hand or power tools	2
Use high voltage apparatus	76
Use knowledge of metric system	39
Use knowledge of welding filler rod types	75
Use machine tools in installation, maintenance, or repair	72
Use pipe fitting equipment	80
Use pneumatic tools	66

Use precision measuring devices in mechanical repair work	61
Use pressure gauges	76
Use robotics systems technology	78
Use soldering equipment	44
Verify levelness or verticality, using level or plumb bob	72
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 88

Focus Occupation: Industrial Machinery Mechanics (49-9041)

Associated Occupation: Millwrights (49-9044)

Tools and Technologies	Exclusivity
Bandsaws and accessories	26
Business function specific software	1
Compressors	9
Computers	1
Cutting and crimping and punching tools	3
Cutting tools	18
Dispensing tools	6
Face and head protection	7
Fastener setting tools	12
Forming tools	2
Heating equipment and parts and accessories	19
Holding and clamping tools	3
Indicating and recording instruments	2
Industrial trucks	10
Industry specific software	1
Integrated circuits	18
Ladders and scaffolding	6
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Machine tools	7
Machinery for working wood and stone and ceramic and the like	12
Measuring and layout tools	3
Mechanical instruments	14
Metal bending and forming machinery	17
Metal working machinery attachments	35
Metals and metallurgy and structural materials testing instruments	15
Power tools	2
Pressure measuring and control instruments	10
Prying and bending tools	10
Pumps	9

Rough and finishing tools	5
Sealing tools	21
Soldering and brazing and welding machinery and supplies	6
Tool attachments and accessories	12
Transportation related equipment and instruments	29
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.